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ABSTRACT

The conversion of a course for delivery via video teleconferencing can easily become an insurmountable task for a faculty member working alone. The model used at Tarleton State University (Stephenville, Texas) for the conversion of courses for delivery via video teleconferencing entails collaboration between the faculty member and an instructional technologist; under this model, the faculty member and the instructional technologist fulfill all four roles of faculty, instructional developer, evaluator, and production people. This paper describes the "Tarleton" model through a case study of the conversion of a graduate-counseling course with a focus on skill development. The unique features of the course, conversion of the delivery system, and skill development at a distance are discussed. (AEF)

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Networking: The Content Specialist and Instructional Technologist Connection: A Case Study for Converting a Skills-Based Counseling Course for Delivery via Video Teleconferencing

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The conversion of a course for delivery via video teleconferencing can easily become an insurmountable task for a faculty member working alone. The model used at Tarleton State University for the conversion of courses for delivery via video teleconferencing entails collaboration between the faculty member and an instructional technologist. This paper describes the "Tarleton" model through a case study of the conversion of a graduate-counseling course with a focus on skill development.

"You want me to do what?" This could be a common response from faculty members to a request from academic department heads concerning teaching a distance learning course. The reason for this type of response by faculty members may be the result of many factors: (a) lack of support, (b) lack of compensation, (c) lack of time, (d) lack of expertise with technology, etc. Each of these issues exists to one degree or another at most institutions of higher education. However, the focus of this discussion is limited to addressing issues related to providing faculty members with support in converting a course for delivery via video teleconferencing.

Need for Collaboration

Efforts to redesign courses may be more successful using a team concept. Moore and Kearsley (1996) described the team approach developed at the British Open University. Under this model, courses are "designed and produced by a team which might consist of as many as 20 people, each of whom is a specialist" (Moore & Kearsley, p. 105). Additionally, Diamond (1989) described another team model and posited, "for a project to be successful, a number of talents are needed. Ideally this team will be composed of faculty, an instructional developer, an evaluator, and production people" (p. 13). The model being discussed in this paper was developed at Tarleton State University and includes a variation on Diamond's team concept.

The "Tarleton" model involves a team of primarily two people, a faculty member and an instructional technologist. In the Tarleton model, the faculty member and the instructional technologist fulfill all four of the roles described by Diamond (1989). Specifically, the instructional technologist serves in the role of instructional developer.

Under this model, both team members serve as the "production people". If the faculty member has limited experience in the use of presentation software (e.g. Microsoft PowerPoint, WordPerfect Presentations), there is an opportunity for the Instructional Technologist to provide training for the faculty member with this type of software. Faculty members on the Tarleton campus tend to find training more effective if they can practice on materials that will actually be used in their courses. This same opportunity for faculty development may also be available concerning the use of several other software packages that could be used to support a video teleconferencing course. Some of these software packages include: (a) image editing (e.g., Adobe PhotoShop), (b) video editing (e.g., Adobe Premier), (c) desktop publishing (e.g., Adobe PageMaker), (d) HTML editing (e.g., Adobe PageMill) (e) drawing (Macromedia Freehand), and (f) animation (e.g., Macromedia Director). Therefore, the faculty member and the instructional technologist will collaborate on the

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development of materials to support the faculty member's video teleconferencing course.

In relation to the evaluation component of the Diamond (1989) model, the faculty member and the instructional technologist can jointly fulfill this role. Faculty members and instructional technologists should both have some knowledge of evaluation methodologies. Therefore, they can jointly develop an evaluation protocol based on the faculty member's goals for the course. Additionally, at Tarleton, the student evaluations of video teleconferencing courses contain the same criteria used in traditional classroom environments.

Perspective of the Faculty Member. The thought of converting a course from a traditional classroom environment to a video teleconferencing environment can be overwhelming to many faculty members. According to Young (1997), "designing a course that replaces lectures with interactive materials requires more technical know-how than most professors possess" (p. 6). Most faculty members want to be successful at whatever they attempt. Therefore, it seems logical that if faculty members are attempting to teach via video teleconferencing, they would want be successful in this endeavor. However, if faculty members lack the technical know-how to do distance learning, it could be extremely disconcerting to them if Dooley (1996) is correct with the proposition that "preparation for delivery of instruction is critical to the success of distance learning and teaching" (p. 81). Therefore, from the perspective of many faculty members, collaboration with an instructional technologist, would be benefical.

The aspect of teaching that is the greatest strength for most faculty members is their knowledge in their content areas. Cyrs (1997) posited that, "it is and has been assumed that a Ph.D. degree in a special academic discipline is an adequate license to teach" (p. 20). However, their knowledge of instructional delivery is often based primarily on the modeling that they received during their own academic preparation. Most faculty members' classroom experiences during their academic preparations had been in traditional classrooms with limited experiences in a video teleconferencing environment. Therefore, it is not surprising that the thought of delivering instruction in an unfamiliar environment like a video teleconferencing classroom could be an anxiety-provoking event.

For this reason, the prospect of collaborating with someone who has experience in a video teleconferencing environment can provide faculty members with a sense of relief knowing that they will not be thrown into an unfamiliar environment without preparation. Additionally, the prospect of collaborating with someone that is not a content specialist in the faculty member's field can reduce anxiety from a concern of "one-upmanship". Rather, under the Tarleton model, the faculty member brings to the collaboration the content expertise. In many instances, the instructional technologist will have little or no knowledge in the faculty member's content area. Referring to the role of the instructional technologist Diamond (1989) posited, "by coming to the project without the discipline's vocabulary and without the traditional viewpoints of the profession, this person can test assumptions and, without being a threat, question what is being done and why" (p. 13).

Perspective of the Instructional Technologist. So what exactly is an instructional technologist? According to the Carnigie Commission on Higher Education (1972), an instructional technologist "is a specialist in the learning process. His or her job is to help faculty members define the objectives of courses of instruction, to plot the learning strategies to be employed, and to evaluate results" (p. 71). Within the context of distance learning, the instructional technologist would be a specialist in applying the concepts of the learning process to a distance learning environment. Therefore, in this situation it would be important for the instructional technologist to have a strong understanding of various distance learning delivery systems.

Willis (1995) posited that "without exception, effective distance education programs begin with careful planning and a focused understanding of course requirements and student needs" (p. 1). This planning and focus form the basis for instructional design. According to Dooley, Edmundson, and Hobaugh (1997), "the basic components of instructional design for traditional teaching apply well for distance teaching (audience/needs analysis; developing learning goals/objectives; developing materials, methods and media for content delivery; and planning for evaluation and feedback)" (pp. 53-54). Instructional design is a primary role of the instructional technologist. Instructional technologists are process people and normally do not possess content expertise in areas outside of their field. Therefore, the opportunity for instructional technologists to integrate their knowledge of the learning process with the content knowledge of faculty members provides a "win-win" situation for everyone interested in the success of the distance learning course.

Creating an Infrastructure for Collaboration

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The possibilities for developing infrastructures to support distance learning are as numerous as the number of institutions that have created such an infrastructure. The nature of the infrastructure at each higher education institution will be determined based on the forces that shape policy within each organization. Some institutions will display a very formalized infrastructure while other organizations will exhibit more informal structures.

U.S. Department of Education Study. According to the U.S. Department of Education (1997), "to date, information has not been available on a national basis about some of the general characteristics of distance education courses and programs that affect the distance education experience for students" (p. 27). During Fall 1995, the U.S. Department of Education conducted a study that "was designed to provide the first nationally representative data about distance education course offerings in higher education institutions" (p. iii). The results of this study can provide insight into the type of infrastructures being created throughout the country to support distance learning.

One area that the U.S. Department of Education (1997) study investigated was "whether various training opportunities for faculty teaching distance education courses were available and whether they were required" (p. 30). The study specifically considered four areas of training as they relate to distance education: (a) support center staff consultation, (b) technology usage and application, (c) teaching methodology, and (d) curriculum development.

The results of the U.S. Department of Education (1997) survey indicated that "consultation with support center staff" (p. 30) was available at 92% of the institutions, but was only required by 28% of the respondents. Most schools involved in distance learning provide some type of "Center" to work with faculty concerning distance learning.

Additionally, the results of the U.S. Department of Education (1997) survey reported that "training in the use and application of distance learning technologies" (p. 30) was available at 86% of the organizations, but was only required by 27% of the colleges. Most institutions provide faculty the opportunity to get "hands on" and practice with the equipment.

Further, the results of the U.S. Department of Education (1997) survey noted that "training in teaching methods for distance education courses" (p. 30) was available at 81% of the colleges, but was only required by 17% of the organizations. A vast majority of the colleges provide opportunities for faculty members to gain an understanding of the methods necessary to be effective in a distance learning environment.

Finally, the results of the U.S. Department of Education (1997) survey documented that "training in the development of curricula for distance education courses" (p. 30) was available at 73% of the institutions, but was only required by 13% of the colleges. Even though most organizations provide opportunities for curriculum development, few institutions have this as a requirement for their distance learning instructors.

Creating an Infrastructure for Collaboration at Tarleton State University. The Tarleton model was only one of many initiatives that resulted from the vision of Dr. Dennis McCabe, President of Tarleton State University. Dr. McCabe realized that if Tarleton was going to provide high quality distance learning opportunities for its students, it would be essential that the University develop an infrastructure to support the total distance learning process. Additionally, Dr. McCabe understood that distance learning is more than a room full of equipment. Therefore, his vision for distance learning at Tarleton had to build upon the University's most valuable asset, its faculty. In part, Dr. McCabe's plan for distance learning involved the creation of the Center for Instructional Technology and Distance Learning. One of the roles of the Center is to provide coordination of the University's distance learning efforts.

Center for Instructional Technology and Distance Learning. The Center was established during the Summer of 1996. In order to ensure that the Center was viewed by faculty as their Center, a member of the faculty was selected as the Center's director. Additionally, another faculty member was given a 50% assignment in the Center to serve as an instructional technologist. In addition to expanding into the area of distance learning, the Center incorporated the responsibilities of the Media Center. The Center provides support for faculty members in both traditional classrooms as well as distance learning environments. Specifically, some of the Center's activities that are most utilized by faculty members include (a) use of hardware and software, (b) training, (c) consultation, and (d) material conversion services.

Use of Hardware and Software. In addition to traditional media equipment, the Center provides several items that are available for checkout by faculty or for use in the Center. Some of the most popular items checked out by faculty members include (a) digital cameras, (b) notebook computers, and (c) LCD projectors. The Center has recently established two work areas for use by faculty members. The first work area is the Instructional Development Workshop and the second work area is

the Multimedia Workshop. Both of these work areas are located immediately adjacent to the Center. Therefore, the Center's staff is close by if faculty members need assistance in the use of any of the hardware or software contained within either of the workshops. However, by placing these work areas outside of the Center, faculty members can obtain access to them on a 24-hour basis. Additionally, faculty members will not experience the sensation that someone is standing over their shoulders.

The Instructional Development Workshop contains eight desktop computers (i.e., four Windows based and four Macintosh based). Additionally, this workshop includes scanners and a laser printer as well as access to the World Wide Web (WWW). The hardware and software in this workshop allows faculty to develop multimedia materials.

The Multimedia Workshop contains two workstations (i.e., one Windows NT based and one Macintosh based) for developing sophisticated multimedia applications. These workstations include hardware and software for developing interactive applications for delivery via CD-ROM or the WWW. Additionally, each of these workstations serves as nonlinear editing systems for video. Finally, the Multimedia Workshop contains a CD-ROM recorder that can be used with either of the workstations.

Training. The Center's staff provides professional development opportunities for all faculty concerning the use of various technologies in instruction. The Instructional Development Workshop serves as the primary location for computer-related hardware and software training. Training in this Workshop is designed for small groups (i.e., 3 to 4 faculty members per session). Additionally, follow-up training is conducted for faculty members either in the Center or in the faculty members' offices. Given the numerous possible hardware configurations as well as the various versions of many software packages, it is helpful for faculty members to receive follow-up training in their individual offices on the equipment that they use on a regular basis.

Consultation. The Center's staff provides consultation for faculty members concerning a number of issues related to instructional technology. Specifically, Center personnel meet individually with faculty members to discuss (a) instructional design, (b) graphics design, (c) web page design, and (d) techniques for incorporating various forms of media in the teaching and learning process.

Material Conversion Services. Members of the Center's staff will also convert a faculty member's material to different mediums. Cost for these services are limited to recovery of materials. Specifically, the staff will convert materials to (a) 35-mm slides; (b) color laser printed transparencies, (c) black and white laser printed transparencies, and (d) color posters created on a plotter.

Case Study of Collaboration

During the Spring 1998 semester, a Tarleton faculty member will be teaching CNSL 5503 "Introduction to Counseling" via video teleconferencing for students on both the Tarleton campus and at Weatherford College. The students on the Tarleton campus will be in the University's newest distance learning classroom located in the Tarleton Center. This classroom is immediately adjacent to the Center for Instructional Technology and Distance Learning. The classroom at Weatherford College is located in its new Technology Building. The classroom at Weatherford College is the result of a collaborative effort between Weatherford and Tarleton. Specifically, Weatherford provided the facility and the furniture as well as the telephone lines. In turn Tarleton, provided all of the video teleconferencing equipment.

The faculty member started the process of planning for this course during September 1997. After approaching her department head and receiving approval to teach this course via video teleconferencing during the Spring 1998 semester, she immediately initiated the process of preparing for the conversion of the course. She started the process by dialoging with a member of the Center's staff concerning the type of support that she could expect from the Center. This faculty member had an advantage over other faculty members on campus in that she has completed a graduate course in using video teleconferencing equipment in the teaching and learning process. Therefore, she was already familiar with most aspects of the course conversion process.

Unique Features of Course. This course will be the first Counseling course at Tarleton taught via video teleconferencing. One of the unique features of the course is the existence of a microcounseling skills component. This feature requires that students are able to demonstrate an established level of counseling skills. Cyrs (1997) described the use of two-way television (i.e., video teleconferencing) "in a counseling environment or any other type of teaching environment where visual feedback is essential" (p. 39).

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Conversion of Materials. The materials conversion process began with creating PowerPoint slide presentations based on the faculty member's notes and the textbook that is going to be used in the course. The Tarleton model suggests that the two person (i.e., faculty member and instructional technologist) team should accomplish this material conversion. However, in this situation, a graduate assistant on the Center's staff, working under the supervision of the team, completed most of the material conversion. The graduate assistant was assigned to work with this particular material conversion for two reasons. First, this graduate assistant, by chance, is pursuing a master's degree in counseling and had completed the Introduction to Counseling course during the Spring 1997 semester. Therefore, the graduate assistant was very familiar with the basic content of the material. Second, the graduate assistant was unfamiliar with the PowerPoint software package at the beginning of the semester and this provided a set of material to use as she learned about the different components of the software package. Throughout the material conversion process, the graduate assistant met on a regular basis with both the faculty member and the instructional technologist.

This process began by creating an outline from the faculty member's notes and the textbook's chapters, then converting this text to slides. After the text was placed on the slides, graphics were added to the slides in an effort to reinforce ideas (Cyrs, 1997). The graphics were selected from three sources (a) clip art, (b) scanned images from the textbook, and (c) images from the WWW. The next task involved selecting background designs, color combinations, and typefaces that reinforced the content and provided excellent legibility in a video teleconferencing environment. The final task in this initial phase of material conversion for the graduate assistant was to integrate animations and slide transitions that also reinforced the content.

In order for the faculty member to assess the effectiveness of the PowerPoint slides, the faculty member made arrangements with the instructional technologist to use the slides with an LCD projector, notebook computer, and remote mouse (i.e., Logitech Surfman) in her Fall 1997 section of the Introduction to Counseling course. This provided her the opportunity to receive feedback from the students concerning the content and design of the slides.

After this initial presentation with the slides, the faculty member made arrangements to bring the students in her current Introduction to Counseling course to the Tarleton Center's video teleconferencing classroom. Her purpose for this activity was twofold. First, it provided her an opportunity to practice with the video teleconferencing equipment while students were present. Second, it allowed her to use the slides with the equipment that she will be using during the Spring 1998 semester.

After reviewing the slides with the instructional technologist and receiving feedback from her students, she met with the graduate assistant and indicated the changes that needed to be made in the slides. These changes were made and the final project was turned over to the faculty member.

Conversion of Delivery System. The faculty member has always used a very interactive style in her courses. Therefore, limited changes are anticipated in her approach to course delivery. She indicated that her biggest concern involved the need to switch between video inputs of her image and the PowerPoint slides during the content delivery portions of the class. Therefore, she expressed great interest in one of the unique features of the distance learning classroom in the Tarleton Center, the integration of an audio/video mixer (i.e. Panasonic Digital A/V Mixer WJ-MX50) into the video teleconferencing system. This unit, like most mixers, provides the ability to apply various wipes and keys. However, the primary use of this mixer is to utilize its chroma key capabilities. This feature allows the faculty member to superimpose her image over any other video source (e.g., PowerPoint slides, videotape, objects on the document stand, etc.). This enables her to provide the students at the Weatherford site the opportunity to see both her and the video input without switching between input sources.

Skill Development across a Distance. As indicated earlier, one of the unique features of this course is the microcounseling skills component. This will be the biggest challenge that the faulty member will face in teaching this course in a video teleconferencing environment. However, most of the skill development is accomplished through student participation in small group role-plays. In a traditional classroom, she has had the ability to move between small groups and observe the students in action. However, in a video teleconferencing environment it will not be possible for the faculty member to move between groups at the Weatherford campus. Therefore, she plans to have different groups at both sites move to the presenter's area in the front of the rooms and model various techniques. Additionally, she is considering the option of video taping the remote site. This would allow her the opportunity to review the role-plays from this site after class. Unlike the PowerPoint slides and using the video teleconferencing equipment during this semester with her class, there was no way to simulate the microskills training at the Weatherford site.

Conclusion

The success of video teleconferencing starts with a University providing an infrastructure that supports the faculty. At Tarleton State University, the central component of this infrastructure is the Center for Instructional Technology and Distance Learning.

Another component of a successful video teleconferencing effort involves providing a mechanism for faculty members to collaborate with instructional technologists that have an understanding of the teaching and learning process as it applies to the video teleconferencing environment. The case study presented in this paper described how a faculty member at Tarleton State University and an instructional technologist from the Center for Instructional Technology and Distance Learning have collaborated in converting a graduate level skill based course for delivery via video teleconferencing.

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